

CLAIMS

1. A method for the *in vitro* culture of a myeloma cell line which comprises:
 - (a) inoculating a culture medium with a myeloma cell line, said medium being capable of supporting the growth of said myeloma cell line and comprising iron at concentrations in the medium of from about 0.03 mg/L to about 3.2 mg/L, wherein said medium does not contain transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator; and
 - (b) growth of the inoculated culture medium under appropriate conditions and using agitated suspension culture.
2. The method of claim 1 wherein the concentration of iron in the medium is from about 0.03 mg/L to about 2.4 mg/L.
3. The method of claim 1 wherein the concentration of iron in the medium is from about 0.064 mg/L to about 1.6 mg/L.
4. The method of claim 1 wherein the concentration of iron in the medium is from about 0.16 mg/L to about 0.32 mg/L.
5. The method of claim 1 wherein the source of iron is a soluble iron compound.
6. The method of claim 5 wherein the soluble iron compound is selected from the group consisting of ferrous or ferric salts or simple chelates thereof.
7. The method of claim 6 wherein the soluble iron compound is selected from the group consisting of ferrous sulphate, ferrous citrate, ferric citrate and ferric ammonium compounds.
8. The method of claim 7 wherein the ferric ammonium compound is selected from the group consisting of ferric ammonium citrate, ferric ammonium oxalate, ferric ammonium fumarate, ferric ammonium malate and ferric ammonium succinate.
9. The method of claim 7 wherein the ferric ammonium compound is ferric ammonium citrate.
10. A method for the *in vitro* culture of a myeloma cell line which comprises:

- (a) inoculating a culture medium with a myeloma cell line, said medium being capable of supporting the growth of said myeloma cell line and comprising ferric ammonium citrate at a concentration in the medium of from about 0.2 mg/L to about 20 mg/L, wherein said medium does not contain transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator; and
 - (b) growth of the inoculated culture medium under appropriate conditions and using agitated suspension culture.
11. The method of claim 10 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.2 mg/L to about 15 mg/L.
12. The method of claim 10 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.4 mg/L to about 10 mg/L.
13. The method of claim 10 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 1 mg/L to about 2 mg/L.
14. The method of claim 1 or 10 wherein the medium is serum free, protein free, free of components of animal derivation or is chemically defined.
15. The method of claim 1 or 10 wherein the myeloma cell line is selected from the group consisting of an NSO series, a P3 series, MOPC series, MPC-11, J558L, K6H6/B5, 45.6.TG1.7, Y0, Y3 HTK, RPMI 8226 and U266B1.
16. The method of claim 1 or 10 wherein the myeloma cell line is an NSO cell line.
17. The use of a culture medium for supporting the *in vitro* growth of a myeloma cell line under agitated suspension culture conditions, wherein the culture medium comprises iron at concentrations in the medium of from about 0.03 mg/L to about 3.2 mg/L, wherein said medium does not comprise transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator.
18. The use of claim 17 wherein the concentration of iron in the medium is from about 0.03 mg/L to about 2.4 mg/L.

19. The use of claim 17 wherein the concentration of iron in the medium is from about 0.064 mg/L to about 1.6 mg/L.
20. The use of claim 17 wherein the concentration of iron in the medium is from about 0.16 mg/L to about 0.32 mg/L.
21. The use of claim 17 wherein the source of iron is a soluble iron compound.
22. The use of claim 21 wherein the soluble iron compound is selected from the group consisting of ferrous or ferric salts or simple chelates thereof.
23. The use of claim 21 wherein the soluble iron compound is selected from the group consisting of ferrous sulphate, ferrous citrate, ferric citrate and ferric ammonium compounds.
24. The use of claim 21 wherein the ferric ammonium compound is selected from the group consisting of ferric ammonium citrate, ferric ammonium oxalate, ferric ammonium fumarate, ferric ammonium malate and ferric ammonium succinate.
25. The use of claim 24 wherein the ferric ammonium compound is ferric ammonium citrate.
26. The use of a culture medium for supporting the *in vitro* growth of a myeloma cell line under agitated suspension culture conditions, wherein the culture medium comprises ferric ammonium citrate at a concentration in the medium of from about 0.2 mg/L to about 20 mg/L, wherein said medium does not comprise transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator.
27. The use of claim 26 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.2 mg/L to about 15 mg/L.
28. The use of claim 26 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.4 mg/L to about 10 mg/L.
29. The use of claim 26 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 1 mg/L to about 2 mg/L.

30. The use of claim 17 or 26 wherein the medium is serum free, protein free, free of components of animal derivation or is chemically defined.
31. The use of claim 17 or 26 wherein the myeloma cell line is selected from the group consisting of an NSO series, a P3 series, MOPC series, MPC-11, J558L, K6H6/B5, 45.6.TG1.7, Y0, Y3 HTK, RPMI 8226 and U266B1.
32. The use of claim 17 or 26 wherein the myeloma cell line is an NSO cell line.
33. A process for obtaining a mammalian cell product comprising culturing a myeloma cell capable of producing said product under agitated suspension culture and in a culture medium capable of supporting the growth of said myeloma cell line, said medium comprising iron at concentrations in the medium of from about 0.03 mg/L to about 3.2 mg/L, wherein said medium does not contain transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator; and recovering said mammalian cell product.
34. The process of claim 33 wherein the concentration of iron in the medium is from about 0.03 mg/L to about 2.4 mg/L.
35. The process of claim 33 wherein the concentration of iron in the medium is from about 0.064 mg/L to about 1.6 mg/L.
36. The process of claim 33 wherein the concentration of iron in the medium is from about 0.16 mg/L to about 0.32 mg/L.
37. The process of claim 33 wherein the source of iron is a soluble iron compound.
38. The process of claim 37 wherein the soluble iron compound is selected from the group consisting of ferrous or ferric salts or simple chelates thereof.
39. The process of claim 37 wherein the soluble iron compound is selected from the group consisting of ferrous sulphate, ferrous citrate, ferric citrate and ferric ammonium compounds.

40. The process of claim 39 wherein the ferric ammonium compound is selected from the group consisting of ferric ammonium citrate, ferric ammonium oxalate, ferric ammonium fumarate, ferric ammonium malate and ferric ammonium succinate.
41. The process of claim 40 wherein the ferric ammonium compound is ferric ammonium citrate.
42. A process for obtaining a mammalian cell product comprising culturing a myeloma cell capable of producing said product under agitated suspension culture and in a culture medium capable of supporting the growth of said myeloma cell line, said medium comprising ferric ammonium citrate at a concentration in the medium of from about 0.2 mg/L to about 20 mg/L, wherein said medium does not contain transferrin, a lipophilic chelator, a synthetic nitrogen-containing chelator or a lipophilic synthetic nitrogen-containing chelator; and recovering said mammalian cell product.
43. The process of claim 42 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.2 mg/L to about 15 mg/L.
44. The process of claim 42 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 0.4 mg/L to about 10 mg/L.
45. The process of claim 42 wherein the ferric ammonium citrate is present in the medium at a concentration of from about 1 mg/L to about 2 mg/L.
46. The process of claim 33 or 42 wherein the medium is serum free, protein free, free of components of animal derivation or is chemically defined.
47. The process of claim 33 or 42 wherein the myeloma cell line is selected from the group consisting of an NSO series, a P3 series, MOPC series, MPC-11, J558L, K6H6/B5, 45.6.TG1.7, Y0, Y3 HTK, RPMI 8226 and U266B1.
48. The process of claim 33 or 42 wherein the myeloma cell line is an NSO cell line.
49. The process of claim 33 or 42 wherein the cell product is selected from the group consisting of polypeptides, proteins, hormones, lymphokines, interleukins and industrially and therapeutically useful enzymes.

50. The process of claim 49 wherein the cell product is an antibody or fragment thereof.